think proper, be the professor of botany in the University. It is especially provided that this bequest is to be in addition to the sum already spent by the University and other bodies on the teaching of botany. The garden is to be known as the Cruickshank Botanical Garden, in memory of the donor's late brother, Dr. Alexander Cruickshank, and it is to be held by the trustees in all time for the use, enjoyment and behoof of the University of Aberdeen and of the general public, without any preferable right on either, except as it may be thought right by the trustees to set apart class-rooms and laboratories for the use of either body. Professor Trail, the professor of botany, in his opening address to his class at the beginning of the summer session, on April 25th, alluded to this gift, and to the great advantage which it would be to the botanical department at the University. He also touched on the changes which the last few years had worked in this department, and on the great facilities which were now offered to botanical students, especially since the opening of the handsome new laboratories and class-rooms last year.

A LETTER addressed to the London *Times* by 'A Kew Student' protests against opening the gardens to the public in the mornings, as follows: As holder of a student's ticket which will be rendered practically useless by the change, may I be allowed to explain how the proposed opening of the gardens at 10 a. m. will affect students at Kew? The difficulty does not lie in the large or small number of visitors, but in a rule—namely, that students must abstain from handling plants after the admission of the public. I am informed that this regulation is so far necessary by way of example that it is observed by the authorities themselves. The public recognize a working gardener, but if one stranger were seen to interfere with plants others would naturally see no harm in doing the same. Where the convenience of the public is concerned, individual protests appear selfish and ridiculous, but I am informed that there are 800 students upon the books, and surely their interests deserve consideration, inasmuch as Kew-gardens are intended to be used for scientific purposes. As an individual I should have been satisfied and very grateful if students had been permitted to retain certain mornings of the week, and I shall be glad if you will allow me to point out that the recent decision has caused disappointment and vexation to at least one worker. My ticket carries the privilege of gathering certain specimens for botanical research; it will be difficult for students, who like myself live in London, to use the gardens before 10 a. m., and it is out of the question that I, or any other student, should collect plants out of doors or work in hothouses during public hours.

AT a meeting of the Zoological Society of London on April 19th a communication was read from Dr. Bashford Dean, describing further evidence of the existence of possible paired fins in the problematical Devonian organism *Palæospondylus*. He maintained his former views, as opposed to those of Dr. R. H. Traquair expressed in a former communication to the Society. Mr. Smith Woodward, in communicating this paper, remarked that he was inclined to agree with Dr. Traquair's interpretations of the markings on the stone round the skeletons of *Palæospondylus* as entirely due to inorganic agencies. In support of this view he exhibited the specimen from Dr. Traquair's collection noticed by Dr. Dean.

UNIVERSITY AND EDUCATIONAL NEWS.

THE new buildings of the University of Virginia will be dedicated in June, the exercises beginning on the 12th. It is expected that three Presidents of the United States, Mr. McKinley, Mr. Cleveland and Mr. Harrison will take part in the ceremonies.

THE building for the museums of the University of Pennsylvania is now nearing completion, and plans are being drawn for a building for the departments of physiology, pathology and pharmacology.

A BUILDING for the College of Agriculture of Ohio State University has been completed during the present year at a cost of $70,000.

CONGREGATION, at Oxford, passed, on May 4th, a decree which will require the ratification

of Convocation, authorizing the expenditure of $7,500 in removing and reconstructing the iron laboratory at the University Museum, at present occupied by the Linacre professor of comparative anatomy, and in erecting, on or near to the site of that laboratory, a new laboratory and lecture-room for the joint use of the Sherardian professor of botany and the Linacre professor of comparative anatomy.

By the will of the late Dr. Elizabeth H. Bates, of Port Chester, N. Y., the University of Michigan will receive $125,000, the income from which is to be used in establishing a chair for the diseases of women and children, to be known as the Bates professorship.

The will of the late Mrs. Annie S. Paton, of New York, leaves $100,000 to Princeton University, subject to an interest for life of her two sons. The bequest is to found a fund for an endowment for Paton lectureships in ancient and modern literature.

The *Troy Times*, in its supplement of April 2d, devotes its whole space of 24 large pages to a description of Cornell University by ex-Governor Cornell, President Schurman and members of the Faculty, with many illustrations of the campus, the adjacent country and grounds and buildings, and with excellent portraits of prominent founders, heads of leading departments and lecturers. The issue constitutes the best and most complete popular account of a great educational institution that, perhaps, has ever come from the press of even our leading newspapers. It is a most admirable tribute to higher learning, as well as to the university which is its subject.

There are this year four hundred and thirty-eight candidates for degrees at Cornell University, of which twelve are for the A.M. and twenty-six for the Ph.D. degree.

The American fellowship of the Association of Collegiate Alumnæ has been awarded to Miss Caroline Ellen Furness, a graduate of Vassar College and now assistant in the Vassar College observatory. Miss Furness has also won the scholarship in astronomy and mathematics offered by Barnard College. She will study at Columbia University.

The following fellowships have been awarded at Bryn Mawr College: *Mathematics*—Louise D. Cummings, of Canada, A.B., University of Toronto; Fellow, University of Pennsylvania, 1896–97, now graduate student University of Chicago. *Chemistry*—Margaret B. MacDonald, of Virginia; Graduate in Science, Mt. Holyoke, where she was for two years assistant in the laboratory before coming to Bryn Mawr, has been studying at Bryn Mawr during this year as graduate scholar. *Biology*—Annah Putnam Hazen, of Vermont, B.L., Smith College, 1895; M.S., Dartmouth College, 1897; graduate student, Bryn Mawr College, this year and graduate scholar.

Professor Edwin Brant Frost, of Dartmouth College, has been elected professor of astrophysics at Yerkes Observatory. The *Chicago University Record* states that after graduating from Dartmouth in 1886 Professor Frost took Professor Young's course in practical astronomy at Princeton, and returned to Dartmouth as instructor in physics and astronomy. In 1890 he went to Germany and spent one semester at Strassburg, where he intended to continue his studies. But the opportunity of becoming voluntary assistant at the Imperial Astrophysical Observatory in Potsdam, which is but rarely accorded, took him to that celebrated institution, where he assisted Professors Vogel and Scheiner in their important spectroscopic researches on the motion of stars in the line of sight. A year later he was appointed assistant on the regular staff, and undertook his well-known investigations on the thermal radiation of sun-spots and the solar surface. The results of this work have cast grave doubts on the validity of the long accepted idea that sun-spots are cavities in the photosphere. In 1892 Mr. Frost was elected assistant professor of astronomy in Dartmouth College and Director of the Shattuck Observatory. Three years later he was advanced to a full professorship. His best known work since his return from Germany is his translation and revision of Scheiner's 'Astronomical Spectroscopy,' which everywhere takes precedence over the original as the standard treatise on the subject. At the Yerkes Observatory Professor Frost will devote special attention to a photographic study of stellar spectra with the large telescope.

PROFESSOR E. F. NICHOLS, of Colgate University, has accepted a call to the chair of physics at Dartmouth College.

DR. C. M. BAKEWELL, of the University of California, has been appointed associate professor of philosophy at Bryn Mawr College.

THE Frank Small studentship in botany of Gonville and Caius College, Cambridge, will be vacant in June. It may be held for two or three years, and is of the annual value of £100.

THE Aberdeen Universities Court has appointed Mr. John Clarke, M.A., Aberdeen, to be lecturer in education for the term of three years, in succession to Dr. Joseph Ogilvie, whose term of office has expired.

DISCUSSION AND CORRESPONDENCE.

SPIRITUALISM AS A SURVIVAL.

TO THE EDITOR OF SCIENCE: The discussion in SCIENCE in regard to the occult phenomena supposed to be manifested by Mrs. Piper induces me to recall a controversy I had with a distinguished psychologist who expressed the belief that in Mrs. Piper he had, at last, encountered evidences of a supernatural character. In a discussion with a very eminent Englishman, a spiritualist, I found that he placed implicit faith in mediums who had been repeatedly exposed as most arrant humbugs. No intelligent seeker after evidences of supernaturalism would, for a moment, accept the manifestations of these frauds, and yet, with the blandness of an insane person, this eminent spiritualist received, without a reservation, the messages of these humbugs. In the Proceedings of the Society for Psychical Research two eminent psychologists recount the remarkable performances of a medium in Sicily, which they fully accepted as genuine, yet my distinguished psychologist above mentioned, with his keen method of penetrating frauds of all kinds, exposed this apparent wonder. Now he in turn encounters Mrs. Piper and, his limit of penetration having been reached, he falls into line just as promptly as the rest. Here you have, then, a number of men with varying degrees of penetrating powers. One set all agape with speculative wonder, as Huxley said of Bastian, accepting stuff as genuine which many alert newspaper reporters had shown to be spurious; another set, endowed with a modicum of common sense, repudiating the peripatetic mediums yet snared by more skillful frauds; still higher are others who are not deceived by these, but are in turn bamboozled by more deftly played tricks; and finally the highest intellects who, in an encounter with some exceedingly adroit female medium, are puzzled by the manifestations and, not having that judicious calm which might frankly wait for more light, plunge into the regions of the occult for an explanation as readily as did their more ignorant confrères under the capers of the charlatans. I think a fair explanation of this attitude of the human mind, which always excites more wonder in a rational being than do the séances of cunning mediums, is that we have clearly before us the evidences of survival. From a time when all believed in omens, portents, dreams, warnings, etc., what wonder that a sufficient number of molecules have been transmitted whose potency overrides common sense. In no other way can we explain why in the latter years of the nineteenth century there are in our midst men, otherwise intelligent, who fully believe in astrology. It is as utterly impossible to convince people thus afflicted as it would be to argue with inmates of an insane asylum. We may regard with interest, akin with pity perhaps, those who waste their phosphorus in trying to convince the world that they are right. We are compelled to explain their attitude, not by significantly striking our head with the index finger as we contemplate them, but by insisting that they present most interesting examples of survival, and, if they did but realize it, how interesting they would be to themselves!

The conception of a flat world was at one time universal; to the masses, however, the demonstration that it was round or square or pyramidal induced no special mental disturbance—no more, indeed, than when it was shown that the air they breathed was composed of certain gases, had a certain weight, etc. The belief in dreams, omens, signs, etc., was an active one; it was invoked at all times; the mind, for centuries, was super-saturated with it, and hence its survival among children, today, among the masses and, rarer still, among